
California Board of Registered Nursing

2009-2010 Annual School Report

Data Summary and Historical Trend Analysis

A Presentation of Pre-Licensure Nursing Education Programs in California

Southern California I

Los Angeles and Ventura Counties

May 12, 2011

Prepared by:
Tim Bates, MPP
Dennis Keane, MPH
Joanne Spetz, PhD
Center for the Health Professions
University of California, San Francisco
3333 California Street, Suite 410
San Francisco, CA 94118



INTRODUCTION

Each year, the California Board of Registered Nursing (BRN) requires all pre-licensure registered nursing programs in California to complete a survey detailing statistics of their programs, students and faculty. The survey collects data from August 1 through July 31. Information gathered from these surveys is compiled into a database and used to analyze trends in nursing education.

The BRN commissioned the University of California, San Francisco (UCSF) to conduct a historical analysis of data collected from the 2000-2001 survey through the 2009-2010 survey. In this report, we present ten years of historical data from the BRN Annual School Survey. Data analyses were conducted statewide and for nine economic regions¹ in California, with a separate report for each region. All reports are available on the BRN website (<http://www.rn.ca.gov/>).

This report presents data from the 2-county Southern California I region. Counties in the region include Los Angeles and Ventura. All data are presented in aggregate form and describe overall trends in the areas and over the times specified and, therefore, may not be applicable to individual nursing education programs. Additional data from the past ten years of the BRN Annual School Survey are available in an interactive database on the BRN website.

Data collected for the first time from the 2009-2010 survey are identified by the symbol (§). The reliability of these new data will be reviewed and considered for continued inclusion in future surveys.

¹ The nine regions include: (1) Northern California, (2) Northern Sacramento Valley, (3) Greater Sacramento, (4) Bay Area, (5) San Joaquin Valley, (7) Central Coast, (8) Southern California I (Los Angeles and Ventura counties), (9) Southern California II (Orange, Riverside, and San Bernardino counties), and (10) Southern Border Region. Counties within each region are detailed in the corresponding regional report. The Central Sierra (Region 6) does not have any nursing education programs and was, therefore, not included in the analyses.

DATA SUMMARY AND HISTORICAL TREND ANALYSES

This analysis presents pre-licensure program data from the 2008-2009 BRN School Survey in comparison with data from previous years of the survey. Data items addressed include the number of nursing programs, enrollments, completions, retention rates, student and faculty census data, the use of clinical simulation by nursing programs, and clinical space and practice restrictions.

Trends in Pre-Licensure Nursing Programs

Number of Nursing Programs

There are 40 nursing programs in the Southern California I region that lead to RN licensure. There was an increase of one new program to this region which is not reflected due to the fact that one existing program previously included in this region is now being tabulated in another region. Both are private BSN programs. Of these programs, 24 are ADN programs, 10 are BSN programs, and 6 are ELM programs. The majority (77.5%) of pre-licensure nursing programs in the Southern California I region are public.

Number of Nursing Programs

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
Total # Nursing Programs	27	28	28	31	31	34	39	39	40	40
ADN Programs	21	22	22	22	23	23	24	24	24	24
BSN Programs	6	6	6	6	5	6	9	9	10	10
ELM Programs				3	3	5	6	6	6	6
Public Programs	22	23	23	24	24	27	31	31	31	31
Private Programs	5	5	5	7	7	7	8	8	9	9

Admission Spaces and New Student Enrollments

Over the past decade, admission spaces available for new student enrollments at pre-licensure nursing program in the Southern California I region have approximately doubled. In recent years the total number has fluctuated slightly, but since 2006-2007 has remained consistently around 4,000 spaces per year. Programs in the region continue to enroll more students than are admission spaces available. In 2009-2010, 3,898 spaces were filled by a total of 4,441 students. The most frequently reported reasons for doing so were to account for attrition and to make use of grant or donor funding.[‡]

[‡] Data were collected for the first time in the 2009-2010 survey.

Availability and Utilization of Admission Spaces

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
Spaces Available	2,024	2,035	2,419	2,417	2,697	3,448	3,828	3,821	4,128	3,898
New Student Enrollments	1,871	1,919	2,341	2,397	2,660	3,773	4,313	4,189	4,506	4,441
% Spaces Filled	92.4%	94.3%	96.8%	99.2%	98.6%	109.4%	112.7%	109.6%	109.2%	113.9%

Pre-licensure nursing programs in the Southern California I region receive more applications requesting entrance into their programs than can be accommodated. The number of qualified applications to programs in the Southern California I region has increased by approximately 1,000 per year in each of the past three years. In 2009-2010, regional programs received 11,284 qualified applications, an increase of 10.8% (n=1,097) over the previous year. As available admission space has remained stable in recent years, the increasing number of applications received for these spaces has resulted in a growing share of qualified applications not accepted for admission. In 2009-2010, 60.6% of qualified applications were not accepted for admission, which represents a ten-year high.

Applications Accepted and Not Accepted for Admission*

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
Qualified Applications	2,877	2,987	4,005	5,026	4,734	8,380	7,963	9,183	10,187	11,284
<i>Accepted</i>	1,871	1,919	2,341	2,397	2,660	3,773	4,313	4,189	4,506	4,441
<i>Not Accepted</i>	1,006	1,068	1,664	2,629	2,074	4,607	3,650	4,994	5,681	6,843
% Qualified Applications <i>Not Accepted</i>	35.0%	35.8%	41.5%	52.3%	43.8%	55.0%	45.8%	54.4%	55.8%	60.6%

*Since these data represent applications rather than individuals, an increase in qualified applications may not represent equal growth in the number of individuals applying to nursing school.

New student enrollments in the region's pre-licensure nursing education programs have increased substantially at all degree levels since 2000-2001. While enrollments in ADN programs appear to have stabilized or declined over the last four years, ELM and BSN programs continue to experience increased enrollments. Private programs in the region also experienced new student enrollment growth in 2009-2010, whereas new enrollments in public programs declined. Despite these trends, the majority of new nursing students in the region continue to be educated through public ADN programs.

New Student Enrollment by Program Type

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
New Student Enrollment	1,871	1,919	2,341	2,397	2,660	3,773	4,313	4,189	4,506	4,441
ADN	1,465	1,491	1,995	1,994	2,059	2,991	3,417	3,223	3,407	2,823
BSN	406	428	346	386	520	610	610	701	802	1,293
ELM				17	81	172	286	265	297	325
Private	350	313	264	295	523	750	794	890	1,128	1,329
Public	1,521	1,606	2,077	2,102	2,137	3,023	3,519	3,299	3,378	3,112

Student Completions

The number of students who completed a nursing program in the Southern California I region has more than doubled (n=1,748) over the past decade. Of the 3,429 students that completed a nursing program in 2009-2010, 73.6% (n=2,524) completed an ADN program, 17.9% (n=613) completed a BSN program, and 8.5% (n=292) completed an ELM program. This distribution will shift over the next several years due to BSN enrollment growth in recent years.

Student Completions

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
Student Completions	1,681	1,575	1,735	1,839	1,826	2,277	2,647	2,854	3,151	3,429
ADN	1,305	1,218	1,391	1,520	1,467	1,789	2,029	2,193	2,362	2,524
BSN	376	357	344	319	359	421	523	421	507	613
ELM				0	0	67	95	240	282	292

Retention Rate

Of the 3,213 students scheduled to complete a nursing program in the 2009-2010 academic year, 74.5% (n=2,394) completed the program on-time, 8.8% (n=284) are still enrolled in the program, and 16.7% (n=535) dropped out or were disqualified from the program. The retention rate has improved for six consecutive years, from a low of 62.0% in 2003-2004 to the current year's 74.5% in 2009-2010.

Student Cohort Completion and Retention Data

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
Students Scheduled to Complete the Program	2,785	2,235	2,447	2,699	2,481	2,531	2,899	3,204	3,481	3,213
Completed On Time	1,460	1,358	1,557	1,674	1,603	1,672	1,917	2,206	2,525	2,394
Still Enrolled	720	492	395	505	243	418	461	397	337	284
Attrition	605	385	495	520	635	441	521	601	619	535
Completed Late [‡]										231
Retention Rate*	52.4%	60.8%	63.6%	62.0%	64.6%	66.1%	66.1%	68.9%	72.5%	74.5%
Attrition Rate	21.7%	17.2%	20.2%	19.3%	25.6%	17.4%	18.0%	18.8%	17.8%	16.7%
% Still Enrolled	25.9%	22.0%	16.1%	18.7%	9.8%	16.5%	15.9%	12.4%	9.7%	8.8%

*Retention rate = (students who completed the program on-time) / (students scheduled to complete the program)

Trends in attrition by program type show that ELM programs have lower attrition rates than ADN and BSN programs. BSN attrition rates among the region's pre-licensure nursing programs have increased in each of the last three years, whereas rates for ADN and ELM programs have remained relatively stable. Attrition rates for both private and public programs were lower in 2009-2010 compared with the previous year, although the rate for private programs is much lower compared to public programs.

Attrition Rates by Program Type

Program Type	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
ADN	24.5%	18.5%	22.4%	20.2%	28.9%	18.5%	21.7%	22.3%	21.5%	20.5%
BSN	8.1%	12.3%	8.7%	14.4%	9.3%	12.4%	3.9%	4.9%	6.6%	7.3%
ELM						8.3%	3.4%	4.5%	3.0%	3.3%
Private	8.2%	18.4%	10.5%	18.9%	16.4%	20.3%	2.5%	6.7%	6.0%	3.7%
Public	24.0%	17.0%	21.7%	19.3%	26.9%	17.1%	21.0%	21.9%	21.1%	18.8%

There has been fluctuation in the retention and attrition rates over the ten-year period documented in the above tables. There were changes to the survey between 2003-2004 and 2004-2005, and between 2004-2005 and 2005-2006 that may have affected the comparability of these data over time.

[‡] Data were collected for the first time in the 2009-2010 survey. These completions are not included in the calculation of either the retention or attrition rates.

Student Census Data

Total enrollment in the Southern California I region's pre-licensure nursing programs has grown by almost 91% over the past decade. In recent years, this growth has been driven by the increasing number of students enrolled in the region's BSN programs. Total enrollment in BSN programs increased by 33% (n=619), between October 15, 2009 and October 15, 2010, compared with an 11% decline (n=582) among ADN programs. After having plateaued for three years, total enrollment in the region's ELM programs increased by 15.7% (n=74) during this same time period.

Student Census Data*

Program Type	Year									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
ADN Program	2,980	3,295	3,491	3,527	4,078	4,696	5,313	5,253	5,202	4,620
BSN Program	1,024	944	1,009	1,095	1,290	1,349	1,269	1,642	1,859	2,478
ELM Program				278	148	302	466	479	470	544
Total Nursing Students	4,004	4,239	4,500	4,900	5,516	6,347	7,048	7,374	7,531	7,642

*Census data represent the number of students on October 15th of the given year. Blank cells indicated that the applicable information was not requested in the given year.

**Changes in the survey may have accounted for the fluctuation in the number of pre-nursing students reported.

Clinical Simulation in Nursing Education

Data indicate that 85.7% (n=30) of the 35 schools in the Southern California I region with pre-licensure nursing programs used clinical simulation² in 2009-2010. Of the five schools that reported that they did not use clinical simulation between 8/1/09 and 7/31/10, one school began using it after 7/31/10 and two reported plans to start using it by the end of this year. 80% (n=24) of the schools that used clinical simulation reported doing so in order to check clinical competencies and to provide clinical experience not available in a clinical setting. 70% (n=21) of schools reported using clinical simulation to standardize clinical experiences and to make up for clinical experiences. Data gathered also show that 73.3% (n=22) of the 30 nursing schools that currently use a clinical simulation center have plans to expand it.

Reasons for Using a Clinical Simulation Center*	2007-2008	2008-2009	2009-2010
To standardize clinical experiences	64.3%	75.9%	70.0%
To provide clinical experience not available in a clinical setting	64.3%	55.2%	80.0%
To check clinical competencies	78.6%	86.2%	80.0%
To make up for clinical experiences	42.9%	55.2%	70.0%
To increase capacity in your nursing program	21.4%	17.2%	10.0%
Number of schools that use a clinical simulation center	14	29	30

*These data were collected for the first time in 2006-2007. However, changes in these questions for the 2007-2008 administration of the survey and lack of confidence in the reliability of the 2006-2007 data prevent comparability of the data. Therefore, data from previous years of the survey are not shown.

² Clinical Simulation Center/Experience - students have a simulated real-time nursing care experience using hi-fidelity mannequins and clinical scenarios, which allow them to integrate, apply, and refine specific skills and abilities that are based on theoretical concepts and scientific knowledge. The experience includes videotaping, de-briefing and dialogue as part of the learning process.

Clinical Space & Clinical Practice Restrictions[‡]

Well over one-half (67.5%, n=27) of the 40 pre-licensure nursing programs in the Southern California I region reported being denied access to 91 clinical placement sites in 2009-2010 that had been available during the 2008-2009 academic year, affecting a total of 584 students. Overall, the most frequently reported reasons for why programs were denied clinical space were competition for space arising from an increase in the number of nursing students in the region, and being displaced by another program. However, there are differences in reasons reported by program type. For example 43.8% of ADN programs reported that space was unavailable because the clinical site was seeking magnet status. In contrast, BSN and ELM programs much more frequently reported competition for space arising from an increase in the number of nursing students in the region as a reason for being denied space, by comparison with ADN programs.

Reasons for Clinical Space Being Unavailable	Program Type			
	ADN	BSN	ELM	Total
	%	%	%	%
Competition for Clinical Space due to Increase in Number of Nursing Students in Region	43.8%	83.3%	100%	63.0%
Displaced by Another Program	56.3%	50.0%	50.0%	55.6%
Staff Nurse Overload	37.5%	66.7%	50.0%	48.2%
Clinical Facility Seeking Magnet Status	43.8%	16.7%	0.0%	29.6%
Decrease in Patient Census	31.3%	50.0%	20.0%	33.3%
Nursing Residency Programs	37.5%	50.0%	20.0%	37.0%
No Longer Accepting ADN Students	37.5%	0.0%	0.0%	22.2%
Other	31.3%	16.7%	33.3%	29.6%
Number of programs	16	6	5	27

[‡] Data were collected for the first time in the 2009-2010 survey.

77% (n=27) of the 35 nursing schools with pre-licensure programs in the Southern California I region reported that students in their programs had encountered restrictions to clinical practice imposed on them by clinical facilities. The most common types of restricted access students faced were to the clinical site itself due to a visit from the Joint Commission or another accrediting agency, bar coding medication administration, and access to electronic medical records. Schools reported that it was uncommon to have students face restrictions on direct communication with health care team members, access to glucometers, or access to IV medication administration.

Type of Restricted Access	Percentage of Schools (%)					# Schools
	Very Uncommon	Uncommon	Common	Very Common	N/A	
Bar coding medication administration	11.1%	7.4%	51.9%	25.9%	3.7%	27
Electronic Medical Records	7.4%	14.8%	44.4%	29.6%	3.7%	27
Glucometers	38.5%	23.1%	7.7%	23.1%	7.7%	26
Automated medical supply cabinets	15.4%	19.2%	30.8%	23.1%	11.5%	26
IV medication administration	18.5%	44.4%	14.8%	14.8%	7.4%	27
Clinical site due to visit from accrediting agency (Joint Commission)	3.9%	30.8%	34.6%	30.8%	0.0%	26
Direct communication with health team	40.7%	37.0%	11.1%	0.0%	11.1%	27
Alternative setting due to liability	26.9%	23.1%	19.2%	7.7%	23.1%	26

Faculty Census Data

On October 15, 2010, there were 1,015 total nursing faculty, which represents a 1.5% (n=15) increase over the previous year. Of the full-time and part-time faculty reported, 39.6% (n=389) were full-time and 60.4% (n=594) were part-time. There continues to be a need for faculty in the region. On October 15, 2010, there were 64 vacant faculty positions, representing a 5.9% faculty vacancy rate.

Faculty Census Data¹

	Year									
	2001	2002	2003	2004	2005 ²	2006*	2007*	2008	2009	2010*
Total Faculty	542	582	592	649	657	846	990	944	1,000	1,015
Full-time	324	337	332	310	250	344	387	389	424	389
Part-time	218	245	260	339	317	502	593	555	576	594
Vacancy Rate**		3.5%	8.4%	3.9%	8.9%	6.8%	7.3%	6.6%	4.6%	5.9%
Vacancies		21	54	26	64	62	78	67	48	64

* The sum of full- and part-time faculty did not equal the total faculty reported in these years.

**Vacancy rate = number of vacancies/(total faculty + number of vacancies)

1 - Census data represent the number of faculty on October 15th of the given year.

2 - Faculty vacancies were estimated based on the vacant FTEs reported.

Summary

Pre-licensure nursing programs in the Southern California I region have seen the number of qualified applications to its 40 pre-licensure nursing programs nearly quadruple over the past decade. However, in recent years as available space has plateaued, this tremendous growth in qualified applications has resulted in an increasing share of applications not accepted for admission. New student enrollments in nursing programs in the region have also grown sharply over the past ten years, although data from the past four years show fluctuating enrollment totals. These enrollment data, combined with the available admission space data, suggest that the region's programs may have reached maximum capacity in terms of accommodating enrollment expansion.

As nursing programs in the region have expanded over the past decade, the number of RN graduates has also grown. Between 2000-2001 and 2009-2010, graduations increased by 104% (n=1,748). Nursing program retention rates have also improved over the past ten years, ranging from 52.4% in 2000-2001 to 74.5% in 2009-2010.

Almost 86% of schools in the Southern California I region with pre-licensure nursing programs reported using clinical simulation in 2009-2010. The importance of clinical simulation is underscored by data collected for the first time in the 2009-2010 survey, which show that approximately 68% of programs (n=27) were denied access to clinical placement sites that were previously available to them. In addition, 77% of schools (n=27) reported that their students had faced restrictions to specific types of clinical practice or to the clinical site itself during the 2009-2010 academic year.

Expansion in nursing education has required nursing programs to hire more faculty. In 2010, Southern California I region RN programs reported that they had 64 faculty vacancies, representing a 5.9% faculty vacancy rate. The number of vacancies and the vacancy rate in 2010 are higher by comparison with the previous year, and RN programs will not be able to continue at the same rate or expand without more faculty.

APPENDIX A – Southern California I Nursing Education Programs**ADN Programs**

Antelope Valley College	Los Angeles Pierce College
Cerritos College	Los Angeles Southwest College
Citrus College	Los Angeles Trade-Tech College
College of the Canyons	Los Angeles Valley College
East Los Angeles College	Moorpark College
El Camino College	Mount Saint Mary's College
El Camino College – Compton Center	Mount San Antonio College
Glendale Community College	Pasadena City College
Long Beach City College	Rio Hondo College
Los Angeles City College	Santa Monica College
Los Angeles County College of Nursing & Allied Health	Ventura College
Los Angeles Harbor College	West Coast University – Los Angeles

BSN Programs

American University of Health Sciences	CSU Los Angeles
Azusa Pacific University	CSU Northridge
Biola University	Mount Saint Mary's College
CSU Channel Islands	University of California Los Angeles
CSU Long Beach	*West Coast University – Los Angeles

ELM Programs

Azusa Pacific University
CSU Dominguez Hills
CSU Long Beach
CSU Los Angeles
University of California Los Angeles
Western University of Health Sciences

*- New program in 2009-2010

APPENDIX B – BRN Education Advisory Committee Members**BRN Education Advisory Committee Members****Members**

Loucine Huckabay, Chair
Sue Albert
Audrey Berman
Liz Close
Patricia Girczyc
Marilyn Herrmann
Deloras Jones
Stephanie Leach
Tammy Rice, MSN, RN
Scott R. Ziehm, ND, RN

Organization

California State University, Long Beach
College of the Canyons
Samuel Merritt University
Sonoma State University
College of the Redwoods
Loma Linda University
California Institute of Nursing and Health Care
formerly with California Community College Chancellor's Office
Saddleback College
University of California, San Francisco

Ex-Officio Members

Louise Bailey California Board of Registered Nursing

Project Managers

Carol Mackay California Board of Registered Nursing
Julie Campbell-Warnock California Board of Registered Nursing